



# 15

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TECH CENTER 1600/2900

## (1) GENERAL INFORMATION:

(i) APPLICANT: SOMMERSVILLE, CHRIS  
SCHIEBLE, WOLF

(ii) TITLE OF INVENTION: MODIFIED CELLULOSE SYNTHASE GENE FROM  
ARABIDOPSIS THALIANA CONFERS HERBICIDE RESISTANCE TO PLANTS

(iii) NUMBER OF SEQUENCES: 2

(iv) CORRESPONDENCE ADDRESS:  
(A) ADDRESSEE: PAUL A. GOTTLIEB, AGCTT  
DEPARTMENT OF ENERGY  
GC-62 (FORSTL) MS-6F-067  
(B) STREET: 1000 INDEPENDENCE AVE. S.W.  
(C) CITY: WASHINGTON, D.C.  
(D) ZIP: 20585

(v) COMPUTER READABLE FORM:  
(A) MEDIUM TYPE: FLOPPY DISK  
(B) COMPUTER: IBM PC COMPATIBLE  
(C) OPERATING SYSTEM: MS-DOS  
(D) SOFTWARE: WORDPERFECT 10

(vi) CURRENT APPLICATION DATA:  
(A) APPLICATION NUMBER: 09/686,234  
(B) FILING DATE: 10/11/2000

(viii) ATTORNEY/AGENT INFORMATION:  
(A) NAME: SMITH, BRADLEY  
(B) REGISTRATION NUMBER: 334436  
(C) REFERENCE/DOCKET NUMBER: S-93994

(ix) TELECOMMUNICATION INFORMATION  
(A) TELEPHONE: 630-252-2160  
(B) TELEFAX: 630-252-2779

## (2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 19 NUCLEOTIDES  
(B) TYPE: NUCLEIC ACID  
(C) ORGANISM: ARTIFICIAL SEQUENCE  
(D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

cgaacttgag acctcttga

0019

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

catgatccat cgtcttagt

0019

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

aatatcgctt gtttttgc

0018

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

tccaaagcta aatcgctat

0019

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID

- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

ctccgtctat tcaagatgc 0019

(2) INFORMATION FOR SEQ ID NO:8:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 19 NUCLEOTIDES
  - (B) TYPE: NUCLEIC ACID
  - (C) ORGANISM: ARTIFICIAL SEQUENCE
  - (D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

acctgaacca tcctccgtc 0019

(2) INFORMATION FOR SEQ ID NO:9:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 19 NUCLEOTIDES
  - (B) TYPE: NUCLEIC ACID
  - (C) ORGANISM: ARTIFICIAL SEQUENCE
  - (D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

tcattttggc cgacttagc 0019

(2) INFORMATION FOR SEQ ID NO:10:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 22 NUCLEOTIDES
  - (B) TYPE: NUCLEIC ACID
  - (C) ORGANISM: ARTIFICIAL SEQUENCE
  - (D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

tctccccact agttttgtgt cc

0022

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

gaaatccaaa tcccagagag g

0021

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

gatttcccca gacgattt

0018

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

agtttatgg ttgcgggttt

0020

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

cagttaatga aacaagcttt gttc

0024

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

gttgagaaaa tcacttttgtt g

0021

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

tggtagatt tgctgtt

0017

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

attctgcatt attagttgtc 0020

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 19 NUCLEOTIDES  
(B) TYPE: NUCLEIC ACID  
(C) ORGANISM: ARTIFICIAL SEQUENCE  
(D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

ttagccatcc caagattct 0019

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 19 NUCLEOTIDES  
(B) TYPE: NUCLEIC ACID  
(C) ORGANISM: ARTIFICIAL SEQUENCE  
(D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

cttcaagggg tcaacagta 0019

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 19 NUCLEOTIDES  
(B) TYPE: NUCLEIC ACID  
(C) ORGANISM: ARTIFICIAL SEQUENCE  
(D) TOPOLOGY: LINEAR

(iii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

taccgagcgt ttttcctat

0019

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

ccagcaccta agtttcaca

0019

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

gttcagttcc cacaaagatt

0020

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA

(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

tcattccgac caaaagtt

0018

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 59 NUCLEOTIDES
- (B) TYPE: NUCLEIC ACID

(C) ORGANISM: ARTIFICIAL SEQUENCE  
(D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

ggactcgcbc gcctgcaggt cgacactagt ggatccaaag aattcgccgc cgcgctcgac 0059

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 28 NUCLEOTIDES  
(B) TYPE: NUCLEIC ACID  
(C) ORGANISM: ARTIFICIAL SEQUENCE  
(D) TOPOLOGY: LINEAR

(ii) MOLECULAR TYPE: cDNA  
(iii) OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE PRIMER

A  
Cont

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

tacggctgcg agaagacgac agaagggg

0028